

AMENDMENTS TO THE CLAIMS

Please amend the claims as follows.

1.- 20. (canceled)

21. (new) A strain gauge type sensor characterized in that the sensor comprises:

- a strain generation body comprising a force receiving portion to which a force is applied, a fixed portion fixed to a supporting body, and an interconnecting portion that interconnects the force receiving portion and the fixed portion and in which strain is generated according to the force applied to the force receiving portion;

- a first strain gauge disposed on the interconnecting portion of the strain generation body;
and

- a second strain gauge disposed on the interconnecting portion at a position nearer to the fixed portion than the first strain gauge, and the interconnecting portion comprises:

- a first diaphragm on which the first strain gauge is disposed;

- a second diaphragm that is thinner than the first diaphragm on which the second strain gauge is disposed; and

- a connecting portion that is thicker than the first diaphragm and connects the first and second diaphragms to each other.

22. (new) The strain gauge type sensor according to claim 21, characterized in that at least one of the difference in thickness between the first and second diaphragms and the difference in length between the first and second diaphragms, is set such that the quantity of change in resistance value of the first strain gauge is substantially equal to the quantity of change in resistance value of the second strain gauge when a force is applied to the force receiving portion.

23. (new) The strain gauge type sensor according to claim 21, characterized in that the sensor comprises two first strain gauges and two second strain gauges, and the first and second strain gauges are arranged on a single straight line.

24. (new) The strain gauge type sensor according to claim 21, characterized in that the sensor comprises six first strain gauges and six second strain gauges, and each set of two first strain gauges and two second strain gauges are arranged on each of three straight lines different from each other.
25. (new) The strain gauge type sensor according to claim 21, characterized in that the force receiving portion is columnar, and each of the fixed portion and the interconnecting portion is annular and disposed concentrically with the force receiving portion.
26. (new) The strain gauge type sensor according to claim 21, characterized in that each of the strain gauges is made of a piezoresistive element.
27. (new) A strain gauge type sensor unit characterized by comprising a plurality of strain gauge type sensors according to claim 21, on a single plane.
28. (new) The strain gauge type sensor unit according to claim 27, characterized in that the plurality of strain gauge type sensors are arranged around a center point at regular angular intervals at the same distance from the center point.
29. (new) The strain gauge type sensor unit according to claim 28, characterized in that the regular angular interval is 90 degrees.
30. (new) The strain gauge type sensor unit according to claim 28, characterized in that the regular angular interval is 120 degrees.
31. (new) A strain gauge type sensor characterized in that the sensor comprises:
a strain generation body comprising a force receiving portion to which a force is applied, a fixed portion fixed to a supporting body, and an interconnecting portion that interconnects the force receiving portion and the fixed portion and in which strain is generated according to the force applied to the force receiving portion;
a first strain gauge disposed on the interconnecting portion of the strain generation body;
and

a second strain gauge disposed on the interconnecting portion at a position nearer to the fixed portion than the first strain gauge,
wherein a connecting portion between the force receiving portion and the interconnecting portion has a predetermined curvature, and a connecting portion between the fixed portion and the interconnecting portion has a curvature larger than the predetermined curvature.

32. (new) The strain gauge type sensor according to claim 31, characterized in that the difference in curvature between the connecting portion between the force receiving portion and the interconnecting portion and the connecting portion between the fixed portion and the interconnecting portion, is set such that the quantity of change in resistance value of the first strain gauge is substantially equal to the quantity of change in resistance value of the second strain gauge when a force is applied to the force receiving portion.

33. (new) A strain gauge type sensor characterized in that the sensor comprises:

a strain generation body comprising a force receiving portion to which a force is applied, a fixed portion fixed to a supporting body, and an interconnecting portion that interconnects the force receiving portion and the fixed portion and in which strain is generated according to the force applied to the force receiving portion;

a first strain gauge disposed on the interconnecting portion of the strain generation body;
and

a second strain gauge disposed on the interconnecting portion at a position nearer to the fixed portion than the first strain gauge, and

wherein the first strain gauge is shorter than the second strain gauge.

34. (new) The strain gauge type sensor according to claim 33, characterized in that the difference in length between the first and second strain gauges is set such that the quantity of change in resistance value of the first strain gauge is substantially equal to the quantity of change in resistance value of the second strain gauge when a force is applied to the force receiving portion.

35. (new) A strain gauge type sensor characterized in that the sensor comprises:

a strain generation body comprising a force receiving portion to which a force is applied, a fixed portion fixed to a supporting body, and an interconnecting portion that interconnects the force receiving portion and the fixed portion and in which strain is generated according to the force applied to the force receiving portion;
a first strain gauge disposed on the interconnecting portion of the strain generation body;
and
a second strain gauge disposed on the interconnecting portion at a position nearer to the fixed portion than the first strain gauge,
the interconnecting portion comprises:
a first diaphragm on which the first strain gauge is disposed;
a second diaphragm on which the second strain gauge is disposed; and
a connecting portion that connects the first and second diaphragms to each other, and
the first diaphragm is shorter than the second diaphragm.

36. (new) The strain gauge sensor according to claim 35, characterized in that the difference in length between the first and second diaphragms is set such that the quantity of change in resistance value of the first strain gauge is substantially equal to the quantity of change in resistance value of the second strain gauge when a force is applied to the force receiving portion.